

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : David C. Chiles et al.
Serial No. : 09/810,421
Filed : March 19, 2001
Title : HOME-NETWORKING

Art Unit : 2143
Examiner : Jerry B. Dennison
Conf. No. : 6501

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REPLY TO ACTION OF JULY 17, 2006

Claims 1-72 are pending with claims 1, 43, and 61 being independent.

Rejections under the Doctrine of Obviousness-Type Double Patenting

Claims 1-12, 43-52, and 61-72 stand provisionally rejected under the doctrine of obviousness-type double patenting as being unpatentable over claims 1-9, 12-14, 21-30, and 34-45 of copending Application No. 09/810,511. Applicants will address the provisional obviousness-type double patenting rejection upon indication that the claims are otherwise allowable.

Rejections under 35 U.S.C. 103(a)

Claims 1, 43, and 61 were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Number 6,693,878 (“Daruwalla”). Alternatively, claims 1, 43, and 61 were rejected under 35 U.S.C. 103(a) as being unpatentable over Network Telesystems, NTS Tunnel Builder User’s Guide (“NTS”) in view of Newswire Association Inc., “Ramp Networks Announces Comprehensive Virtual Network Solution; Targets Corporate Branch Offices” (“Ramp”). Alternatively, claims 1, 43, and 61, along with their dependent claims, were rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Number 6,671,739 (“Reed”) in view of U.S. Patent Number 6,167,120 (“Kikinis”) and in further view of Daruwalla. Claims 38-42 and 57-60 were rejected under 35 U.S.C. 103(a) as being unpatentable over Reed, Kikinis, and Daruwalla and in further view of U.S. Patent Number 6,487,6050 (“Leung”).

As a preliminary matter, Applicants note that the Final Office Action does not address the substance of the arguments that Applicants previously asserted to overcome the above rejections in Applicants' response to the Non-Final Office Action. Instead, the Final Office Action reasserts the above rejections based on almost the exact same reasoning that was previously set forth in the Non-final Office Action. Applicants are not able to glean from the Final Office Action any insight as to why the Examiner did not find the arguments previously submitted by Applicants convincing. In order to expeditiously advance prosecution, Applicants respectfully request that the Examiner provide more detail as to why the Applicants' previous remarks, incorporated herein by reference in their entirety, are not deemed persuasive.

In particular, Applicants previously argued that Daruwalla fails to describe or suggest at least "the host system is located at one end of the single communication tunnel and is configured to... assign independent Internet addresses to each of the multiple home-networked client devices over the single communication tunnel," as recited in claim 1 and similarly recited in claims 43 and 61.

In response, the Final Office Action asserts:

As explicitly shown in Fig. 3 of Daruwalla, a single communication tunnel exists between cable modem CM2 (304) and the Head End (322). The Head End includes the provisioning server which, when configured as a DHCP server, provides IP addresses to the client devices that sit behind the cable modem CM2. A tunnel exists between CM2 and the Head End. All client devices behind the cable modem communicate through this tunnel with the provisioning server. At the time the provisioning server assigns IP addresses to the clients, one of ordinary skill in the art would interpret the provisioning server as being an endpoint in the communication.

See Final Office Action, page 20, line 16 to page 21, line 2. These assertions do not address Applicant's previous arguments. Rather, the Final Office Action is effectively stating, in a conclusory manner (and in contradiction to previous assertions set forth in the Non-Final Office Action) that Daruwalla teaches a single communication tunnel between the cable modem CM2 (304) and the Head End (322).¹ Applicants previously argued in detail that not only does Daruwalla fail to describe or suggest a single communication tunnel extending from a cable

¹ Compare the Final Office Action's assertion at page 20, line 16 (stating Daruwalla explicitly shows in FIG. 3 a single communication tunnel) to the Non-Final Office Action's assertion at page 16, lines 3-4 (stating in reference to FIG. 3 that Daruwalla does not explicitly state that there is a tunnel between a cable modems and the Head End).

modem and ending at the Head End, but also, and far more importantly, Daruwalla teaches away from establishing a single communication tunnel between a cable modem and the Head End. To enable productive prosecution of this case, Applicants' respectfully request that the Examiner provide more insight as to why the Examiner believes such a tunnel exists in light of Applicants' previous arguments to the contrary.

Specifically, Applicants previously argued, among other things, that

The tunnel described in Daruwalla and referred to by the Office Action extends from the cable modems and ends at the VPN gateway, across the HFC network and the backbone network. Daruwalla at col. 2, line 65 – col. 3, line 3. As such, Daruwalla fails to describe or suggest “the host system is located at one end of the single communication tunnel” and certainly does not describe or suggest “the host system... is configured to... assign independent Internet addresses to each of the multiple home-networked client devices over the single communication tunnel,” as recited in claim 1.

Moreover, the Office Action suggests that “it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a tunnel from a cable modem under VPN to the Head End to establish a secure communication path between the cable modem and an authorized VPN gateway.” Office Action at page 18, lines 2-5. Applicants respectfully disagree. Indeed, Applicants respectfully assert that Daruwalla teaches away from such a combination because such a combination would require each cable modem wishing to establish a tunnel be configured to support IPSec protocol, which Daruwalla describes as one of the disadvantages of the conventional VPN flow management. Daruwalla at col. 3, lines 9-10.

Instead, referring to FIG. 4 of Daruwalla, Daruwalla teaches a technique in which no tunnel is established between the cable modems and the Head End when assigning the IP address to the cable modems. And because it is the VPN gateway that provisions the VPN flow management in Daruwalla any communication tunnel would extend between the Head End and the VPN gateway and not between Head End and the cable modems. Daruwalla at col. 8, lines 51-56 (stating “one advantage of this approach is that VPNs can be provisioned at the CMTS or Head End... and there is no need for special software and/or hardware at the modem for managing VPN flows.”). As such, Applicants respectfully assert that Daruwalla teaches away from configuring the cable modems to establish a tunnel between the cable modems and the Head End.

Accordingly, Daruwalla fails to describe or suggest “the host system is located at one end of the single communication tunnel and is configured to... assign independent Internet addresses to each of the multiple home-networked client devices over the single communication tunnel,” as recited in claim 1 and similarly recited in independent claims [43] and [61]. For at least these reasons, Applicants respectfully request reconsideration and withdrawal of the rejection of claims 1, 43, and 61 along with their dependent claims.

See Response to Non-Final Office Action, page 16, line 18 to page 17, line 20.

Applicants also previously argued in detail that NTS and Ramp, either alone or in the proposed combination, fail to describe or suggest at least “the host system is located at one end of the single communication tunnel and is configured to... assign independent Internet addresses to each of the multiple home-networked client devices over the single communication tunnel,” as recited in claim 1 and similarly recited in claims 43 and 61. In response, the Final Office Action states:

NTS disclosed a tunnel being established between a client device and a VPN server which provides assignment of a new and different IP address (Chapter 3-3). Ramp disclosed a VPN supported hub that allows multiple users sessions on a single tunnel (Ramp, page 1, paragraph 2). Substituting the remote computer of NTS with the smart router of Ramp would allow multiple clients to use the same tunnel for VPN (as described by Ramp) into the DHCP server of NTS, for the benefit of sharing the same secure communication path from the home cable modem or DSL of NTS (NTS, Chapter 2) to the DHCP server and simplifying end user configuration and reducing the number of VPN sessions required (Ramp, page 1, paragraph 2).

NTS provides a way for users to establish a secure connection to their company LAN, and once a tunnel is established, the Company server provides assignment for IP addresses for the users' devices.

The router of Ramp allows multiple users sessions on a single tunnel. Ramp gives an example of providing corporate branch offices and small businesses with a secure access to corporate or partner resources and applications (Ramp, page 1).

It was well within the level of one of ordinary skill in the art at the time the invention was made to include a router in the home to allow multiple computers to connect to the Internet. Therefore it would have been obvious for one of ordinary skill in the art at the time the invention was made to include the router of Ramp into the system of NTS to allow multiple devices to connect to the company server through the single tunnel of Ramp, and to all the company server provide IP addresses to each device.

See Final Office Action, page 21, line 3 to page 22, line 3. Applicants respectfully assert that this contention is identical in substance to the position set forth in the non-final Office Action:

In an analogous art, Ramp disclosed a VPN supported hub that allows multiple users sessions on a single tunnel (Ramp, page 1, paragraph 2).

Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the remote computer of NTS with a router, allowing multiple clients to use the same tunnel for VPN into the DHCP server of NTS, for the benefit of sharing the same secure communication path from the home cable modem or DSL of NTS (NTS, Chapter 2) to the DHCP server and simplifying end user configuration and reducing the number of VPN sessions required (Ramp, page 1, paragraph 2).

See Non-Final Office Action, page 18, lines 1-9.

As such, the Final Office Action fails to address Applicants' previous arguments, which point out the shortcomings of these assertions. In particular, Applicants argued that:

The Office Action asserts that "it would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the remote computer of NTS with a router, allowing multiple clients to use the same tunnel for VPN into the DHCP server of the NTS for benefit of sharing the same secure communication path from the home cable modem or DSL of NTS to DHCP server." Office Action at page 19, line 22 to page 20 line 1. Assuming arguendo this assertion is correct, it still fails to describe or suggest "the host system is located at one end of the single communication tunnel and is configured to... assign independent Internet addresses to each of the multiple home-networked client devices over the single communication tunnel," as recited in claim 1.

In particular, the assignment by a host system of a different independent Internet address to each of multiple different client devices over a single tunnel is not described or suggested by either NTS or Ramp. And combining the two by replacing NTS's remote computer with a router, as suggested by the Examiner, to provide "the benefit of sharing the same secure communication path" does not result in such an assignment.

For example, Applicants respectfully assert that if NTS's remote computer were replaced by a router as suggested by the Examiner, the router may be a conventional NAT router that has been assigned a single Internet address for multiple devices sitting behind the conventional NAT router. The conventional NAT router enables the multiple devices sitting behind it to communicate over the same secure communication path over the internet without each of the devices being assigned a routable Internet address, much less being assigned the Internet addresses by a host system over a tunnel. Thus, the host system only recognizes the NAT router and not the devices communicating through the NAT router with the host system.

The distinction is an important one because the host system as recited in claim 1 is configured to assign an independent Internet address to each of the multiple home-networked client devices over the single communication tunnel. This enables the host system to recognize which of the multiple home-networked client devices communicate with the host over the single communication tunnel, thus empowering the host system to communicate individual information maintained by the host system to the multiple home-networked client devices (e.g., parental controls).

See Response to Non-Final Office Action, page 18, line 21 to page 19, line 23.

For the foregoing reasons, Applicants maintain that the cited references, either alone or in the proposed combination, fail to describe or suggest "the host system is located at one end of the single communication tunnel and is configured to... assign independent Internet addresses to each of the multiple home-networked client devices over the single communication tunnel," as recited in claim 1 and similarly recited in claims 43 and 61. To the extent that the Examiner still disagrees with Applicants' contentions, Applicants respectfully request issuance of another Office Action in which the Examiner addresses the merits of Applicants' previously asserted contentions and sets forth reasons as to why the Examiner finds the contentions incorrect or unpersuasive.

Conclusion

It is believed that all of the pending issues have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this reply should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this reply, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

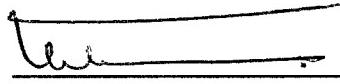
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No fee is believed to be due. However, please apply any other charges or credits to
Deposit Account 06-1050.

Respectfully submitted,

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